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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _29 May 2008_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _8-20,23-37,43-51 and 54-56_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _8-20,23-37,43-51 and 54-56_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

Response to Arguments

1.   Applicant's arguments filed 09/04/2008 have been fully considered but they are not

persuasive.

Examiner's response:

2.   Applicant argues with regards to independent claim 8 that neither the Kuno reference nor

the Ohkubo reference discloses or suggests attaching color space information to image data,

where the color space information designates a color space to be used by an image output

apparatus. The Examiner respectfully disagrees. Kuno reference teaches at col. 6 lines 60-65, col.

12 lines 3- 65, figures 16-19 generating an image file containing image data and information that

designates color space information to be used by an image output apparatus (spectral

responsivity characteristic used for conversion of color space as taught in col. 6 lines 60-65).

Ohkubo has been used to teach information that reflects image output characteristics of said

image output apparatus and used for color space conversion. (col. 7 lines 12-30, figure 1).

Therefore taking the combined teachings of Kuno and Ohkubo, it would be obvious to one

skilled in the art at the time of the invention to have been motivated to have information that

reflects image output characteristics of said image output apparatus and used for color space

conversion to be used in the system of Kuno as taught in Ohkubo.

3.   Regarding the newly added limitation of a color space information being different from a

color space at a time of image data generation. It would be obvious to one skilled in the art in

Kuno that the image data color space and spectral responsivity characteristic of the image pick

up device used for color conversion from an image input device to an image output device are

different (figure 16) at a time of image data generation. This is because in order to convert the

input image color space into output color space which are both different, the spectral

responsivity characteristic has to be different than the image color space.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5.   Claims 8, 13, 15, 17, 28, 30, 34, 36, 43, 45, 54, 55 and 56 are rejected under 35

U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The

claim(s) contains subject matter which was not described in the specification in such a way as to

reasonably convey to one skilled in the relevant art that the inventor(s), at the time the

application was filed, had possession of the claimed invention. The newly added limitation "a

color space information being different from a color space at a time of image data generation" is

not found to have clear support in the specification. As best understood by Examiner in Kuno the

image data color space and spectral responsivity characteristic of the image pick up device used

for color conversion from an image input device to an image output device have to be different

(figure 16) at a time of image data generation. This is because in order to convert the input image

color space into output color space which are both different, the spectral responsivity

characteristic has to be different than the image color space.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 8, 11-15, 17, 18, 23, 27-30, 33-36, 43, 45, 51 and 54- 56 are rejected under 35

U.S.C. 103(a) as being unpatentable over Kuno et al. (US Patent # 6,538,242) in view of Ohkubo

(US Patent # 7,136,187).

[Claim 8]

Kuno et al. teaches a method of generating an image file in a digital still camera comprising

(figure 1 and 16-18, camera 1, col. 1 lines 10-15) comprising generating image data (col. 5 line

64-col. 6 line 4, col. 11 line 60-col. 12 line 2); generating an image file containing image data

generated in generating step and information that designates color space information to be used

by an image output apparatus separated from said still digital camera (spectral responsivity

characteristic used for conversion of color space as taught in col. 6 lines 60-65, (col. 12 lines 3-

65, figures 16-19) of said image data from an input color space to an output color space by said

image output apparatus (col. 12 lines 3-65, figures 16-19); and storing said image data in

association with said information that designates said color space information (col. 12 lines 45-

65). It would be obvious to one skilled in the art in Kuno that the image data color space and

spectral responsivity characteristic of the image pick up device used for color conversion from an

image input device to an image output device are different (figure 16) at a time of image data

generation. This is because in order to convert the input image color space into output color

space which are both different, the spectral responsivity characteristic has to be different than the

image color space.

        Kuno fails to teach information that reflects image output characteristics of said image

output apparatus and used for color space conversion. However Ohkubo teaches at col. 7 lines

12-30, figure 1, coordinate values Lab (Output) derived through conversion by the LUT 50 are

converted into the RGB data for an output device 70 such as a digital printer in accordance with

an output media characteristic conversion defined by an output media characteristic conversion

definition 52 based on output characteristics of the output device 70. The output device 70

outputs an image to an output media 71 such as a printing paper.

Therefore taking the combined teachings of Kuno and Ohkubo, it would be obvious to

one skilled in the art at the time of the invention to have been motivated to have information that

reflects image output characteristics of said image output apparatus and used for color space

conversion to be used in the system of Kuno as taught in Ohkubo in order to generate an image

having a preferable tone of color on the output media as taught in Ohkubo (col. 7 lines 22-24).

[Claim 11]

Kuno teaches a step of assembling an output file that contains said image data, and said color

space information (col. 12 lines 49-65, figures 16-19).

[Claim 12]

Kuno teaches an interface for communicating said output file to said external device (col. 11 line

60-col. 12 line 2, figure 16).

[Claim 13]

Claim 13 is similar to claim 8 except means for designating with color space information an

output color space to be used by an image processing apparatus in color space conversion, said

image processing apparatus being a different apparatus than said means for acquiring data (Kuno

teaches spectral responsivity characteristic used for conversion of color space as taught in col. 6

lines 60-65, col. 12 lines 3-65, figures 16-19).

[Claim 14]

The second color space (RGB) has a gamut width at least equal to a color space like RGB (col.

12 lines 55-65, RGB color space used in the synthesis of the image data which inherently has a

gamut width at least equal to a color space like RGB or CMYK).

[Claims 15, 17]

Claims 15 and 17 corresponds to claims 8, 11-14 and are therefore analyzed and rejected the

same as previously discussed with respect to claims 8, 11-14.

[Claim 18]

Kuno teaches matrix values used for color spaces (col. 13 lines 19-59).

[Claim 23]

Claim 23 recite what was discussed with respect to claim 11.

[Claim 27]

Kuno teaches a communication cable or network for communicating said output file to said

external device (col. 11 line 60-col. 12 line 2), which would inherently be transmitted as an

electric signal.

[Claims 28-29]

Claims 28 and 29 recite what was discussed with respect to claims 13 and 14.

[Claims 30, 33-35]

Computer program storing claims 30, 33-35 corresponds to apparatus claims 8, 11, 13 and 14

and are therefore analyzed and rejected the same as previously discussed with respect to

apparatus claims 8, 11, 13 and 14 respectively.

[Claims 36 and 43]

Kuno teaches a computer program code for performing image processing on image files

containing image data and color space information, said image data and said color space

information being input from independent image data generating apparatus, comprising: means

for acquiring an image file containing image data; means for retrieving said color space

information from said image file acquired by said means for acquiring, wherein said color space

information designating color space conversion (spectral responsivity characteristic used for

conversion of color space as taught in col. 6 lines 60-65) designates a color space from an input

color space to an output color space by an image processing apparatus; and means for converting

the color space of said image data based on said color space information retrieved by said means

for retrieving (col. 12 lines 3-65, figures 16-19). It would be obvious to one skilled in the art in

Kuno that the image data color space and spectral responsivity characteristic of the image pick

up device used for color conversion from an image input device to an image output device are

different (figure 16) at a time of image data generation. This is because in order to convert the

input image color space into output color space which are both different, the spectral

responsivity characteristic has to be different than the image color space.

Kuno fails to teach information that reflects image output characteristics of said image

output apparatus and used for color space conversion. However Ohkubo teaches at col. 7 lines

12-30, figure 1, coordinate values Lab (Output) derived through conversion by the LUT 50 are

converted into the RGB data for an output device 70 such as a digital printer in accordance with

an output media characteristic conversion defined by an output media characteristic conversion

definition 52 based on output characteristics of the output device 70. The output device 70

outputs an image to an output media 71 such as a printing paper.

Therefore taking the combined teachings of Kuno and Ohkubo, it would be obvious to one skilled in the art at the time of the invention to have been motivated to have information that reflects image output characteristics of said image output apparatus and used for color space conversion to be used in the system of Kuno as taught in Ohkubo in order to generate an image having a preferable tone of color on the output media as taught in Ohkubo (col. 7 lines 22-24).

[Claim 45]

Kuno teaches an image processing apparatus for performing image processing on image files containing image data and color space information, said image data and said color space information being input from an independent image data generating apparatus, comprising: means for acquiring an image file containing image data; means for retrieving said color space information from said image file acquired by said means for acquiring, wherein said color space information designating color space conversion (spectral responsivity characteristic used for conversion of color space as taught in col. 6 lines 60-65) designates a color space from an input color space to an output color space by an image processing apparatus; and means for converting the color space of said image data based on said color space information retrieved by said means for retrieving (col. 12 lines 3-65, figures 16-19). It would be obvious to one skilled in the art in Kuno that the image data color space and spectral responsivity characteristic of the image pick up device used for color conversion from an image input device to an image output device are different (figure 16) at a time of image data generation. This is because in order to convert the input image color space into output color space which are both different, the spectral responsivity characteristic has to be different than the image color space.

Kuno fails to teach information that reflects image output characteristics of said image output apparatus and used for color space conversion. However Ohkubo teaches at col. 7 lines 12-30, figure 1, coordinate values Lab (Output) derived through conversion by the LUT 50 are converted into the RGB data for an output device 70 such as a digital printer in accordance with an output media characteristic conversion defined by an output media characteristic conversion definition 52 based on output characteristics of the output device 70. The output device 70 outputs an image to an output media 71 such as a printing paper.

Therefore taking the combined teachings of Kuno and Ohkubo, it would be obvious to one skilled in the art at the time of the invention to have been motivated to have information that reflects image output characteristics of said image output apparatus and used for color space conversion to be used in the system of Kuno as taught in Ohkubo in order to generate an image having a preferable tone of color on the output media as taught in Ohkubo (col. 7 lines 22-24).

[Claim 51]

Kuno teaches a communication cable or network for communicating said output file to said external device (col. 11 line 60-col. 12 line 2), which would inherently be transmitted as an electric signal.

[Claim 54]

Kuno et al. teaches a digital still camera (figure 1 and 16-18, digital still camera 1, col. 1 lines 10-15) comprising means for generating image data (col. 5 line 64-col. 6 line 4, col. 11 line 60-col. 12 line 2); means for generating color space information designating color space conversion (spectral responsivity characteristic used for conversion of color space as taught in col. 6 lines 60-65) of said image data from an input color space to an output color space by an image

processing apparatus separated from digital still camera (col. 12 lines 3-65, figures 16-19); and

means for storing said image data in association with said color space information (col. 12 lines

45-65) and the image processing apparatus (figure 16, image output device 15), including means

for acquiring the image file containing the image data and the color space information, means for

retrieving said color space information from said image file, and means for converting the color

space of said image data based on said color space information retrieved by said means for

retrieving (col. 12 lines 45-65). It would be obvious to one skilled in the art in Kuno that the

image data color space and spectral responsivity characteristic of the image pick up device used

for color conversion from an image input device to an image output device are different (figure

16) at a time of image data generation. This is because in order to convert the input image color

space into output color space which are both different, the spectral responsivity characteristic has

to be different than the image color space.

Kuno fails to teach information that reflects image output characteristics of said image

output apparatus and used for color space conversion. However Ohkubo teaches at col. 7 lines

12-30, figure 1, coordinate values Lab (Output) derived through conversion by the LUT 50 are

converted into the RGB data for an output device 70 such as a digital printer in accordance with

an output media characteristic conversion defined by an output media characteristic conversion

definition 52 based on output characteristics of the output device 70. The output device 70

outputs an image to an output media 71 such as a printing paper.

Therefore taking the combined teachings of Kuno and Ohkubo, it would be obvious to

one skilled in the art at the time of the invention to have been motivated to have information that

reflects image output characteristics of said image output apparatus and used for color space

conversion to be used in the system of Kuno as taught in Ohkubo in order to generate an image

having a preferable tone of color on the output media as taught in Ohkubo (col. 7 lines 22-24).

[Claim 55]

Claim 55 recites what was discussed with respect to claims 17 and 54.

[Claim 56]

Claim 56 recite what was discussed with respect to claims 13, 17 and 54.

8.   Claims 9, 10, 19, 20, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Kuno et al. (US Patent # 6,538,242), Ohkubo (US Patent # 7,136,187) and in further view

of Nakajima (US Patent # 6,650,437).

[Claims 9-10,19-20]

Kuno in view of Ohkubo fails to teach means for designating color space information includes

means for displaying said plurality of items of color space information, and means for selecting

one item of color space information from among said displayed items of color space information.

However Nakajima teaches an image information exchanger device 14 like a PC (col. 11

lines 35-42) has a hard disk 88 that functions as a spool 90 (col. 11 lines 49-56) and is a means

for storing a plurality of items of color space information designated for different types of color

spaces and a plurality of combinations of identifying information (e.g. different values of color

space =1,2,3 corresponds to LUT1, LUT2 and LUT3) for candidate image processing

apparatuses (different types of scanners A, B and C) and associated color space information for

each candidate image processing apparatus (col. 15 lines 10-64, figure 5). A image information

exchanger device 14 which is a PC as stated (col. 11 lines 35-42) has a display device 56 and

keyboard 58 like one shown in figure 2 which can inherently be used as a means for designating

color space by displaying said plurality of items of color space information on the monitor 56,

and selecting one item of color space information (by designating color space values 1, 2 or 3)

and candidate image processing apparatuses from among the color spaces (LUT 1, LUT2, LUT3)

and candidate image processing apparatuses (scanners A, B and C) information by the keyboard

56 which are stored in the hard disk.

Therefore taking the combined teachings of Kuno, Ohkubo and Nakajima, it would have

been obvious to one skilled in the art to have been motivated to have means for designating color

space information includes means for displaying said plurality of items of color space

information, and means for selecting one item of color space information from among said

displayed items of color space information in order for the user to visualize the color display

information on the display thereby making it more user-friendly.

[Claims 31, 32]

Computer program storing claims 31 and 32 corresponds to apparatus claims 9 and 10 and are

therefore analyzed and rejected the same as previously discussed with respect to apparatus

claims 9 and 10 respectively.

9.   Claims 37, 44 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kuno et al. (US Patent # 6,538,242), Ohkubo (US Patent # 7,136,187) and in further view of

Anabuki (US Patent # 6,441,913).

[Claims 37, 44 and 46]

Kuno in view of Ohkubo fails to teach said color space information is not retrieved, said means

for converting the color space converts the color space of said image data based on

predetermined color space information. However Anabuki teaches that if the image structure

information is not present, the image-structure information may be extracted from the whole

image data or preset values may be used for the image structure portion (col. 7 lines 52-56).

Therefore taking the combined teachings of Kuno, Ohkubo and Nakajima, it would have

been obvious to one skilled in the art to have been motivated to have used predetermined color

space to process the image data if the color space information is not retrieved which reduces the

overall load on the CPU making the process easier.

10.   Claim 26 and 47-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuno

et al. (US Patent # 6,538,242), Ohkubo (US Patent # 7,136,187) and in further view of Buhr et al.

(US Patent # 5,528,339).

[Claim 26]

Kuno in view of Ohkubo teaches the limitations of claim 17 but fails to teach wherein the

memory is a removable memory card. However Buhr teaches that the image data and color space

are stored on a Kodak photo CD or a PCMCIA card (col. 26 lines 14-25, col. 14 lines 40-45) in

order to have a portable memory medium which can be easily be carried to any other device

capable of color space conversion. Therefore taking the combined teachings of Kuno, Ohkubo

and Buhr, it would have been obvious to one skilled in the art to have been motivated to have the

image data and color space are stored on a PCMCIA card in order to have a portable memory

medium which can be easily be carried to any other device capable of color space conversion

[Claims 47-48]

Kuno in view of Ohkubo teaches the limitations of claim 45 but fails to teach that the image data

contained in said • image file is represented by a first color space, said first color space is YCC;

said means for acquiring an image file converts the color space of the image data contained in

said image file from said first color space to a second color space, said second color space is first

RGB; and said means for converting the color space converts the color space of said image data

from said second color space to a third color space, said third color space is a second RGB.

However 13uhr et al. teach image data contained in said image file is represented by a first color

space, said first color space is YCC; said means for acquiring an image file converts the color

space 0f file image data contained in said image file from said first color space to a second color

space, said second color space is first RGB; and said means for converting the color space

converts the color space of said image data from said second color space to a third color space,

said third color space is a second RGB (col. 28 lines 32-47, figure 15) in order to convert the

image signals stored into appropriate color space for creating a reproduced image on the selected

output device. Therefore taking the combined teachings of Kuno and Buhr, it would have been

obvious to One skilled in art to have been motivated to have the image data contained in said

image file is represented by a first color space, YCC, means for acquiring an image file converts

the color space of the image data contained in the image file from the first color space to a

second color space, a first RGB and means for converting the color space converts the color

space of said image data from said second color space to a third color space, a second RGB in

order to convert the image signals stored into appropriate color space for creating a reproduced

image on the selected output device.

[Claim 49]

It would be inherent (well known to one skilled in the art) that the second color space (first RGB,

e.g. s-RGB) has a gamut width at least equal to a color space like RGB.

[Claim 50]

Buhr teaches in figure 17 a third color space, CIELAB (col. 29 lines 42-61).

11.   Claims 16, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kuno et al. (US Patent # 6,538,242), Ohkubo (US Patent # 7,136,187) in view of Parulski et al.

(US Patent # 6,310,647).

[Claims 16 and 24]

Kuno in view of Ohkubo teaches the limitations of claims 15 and 23 but fails that the propagated

file structure is an Exif file structure. However Parulski et al. teaches an image file format that is

compatible with both Flashpix and Exif (col. 3 lines 49-65) in order to have a standard (exif) that

can be opened by any computer application that incorporates a JPEG reader which is a widely

used standard compared to Flashpix that is relatively new.

Therefore taking the combined teachings of Kuno, Ohkubo and Parulski, it would have

been obvious to one skilled in the art to have been motivated to have used an Exif file structure

instead of Flashpix in order to have a standard (exif) that can be opened by any computer

application that incorporates a JPEG reader which is a widely used standard compared to

Flashpix that is relatively new.

[Claim 25]

Parulski teaches in Table 2 an Exif application marker (read as tag stored in a makernote portion)

storing color space values (col. 4 line 66).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOGESH K. AGGARWAL whose telephone number is (571)272-7360. The examiner can normally be reached on M-F 9:00AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571)-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Yogesh K Aggarwal/
Primary Examiner, Art Unit 2622